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| 10/756,893 | 01/14/2004 | Timothy E. Dickson | 2400-369A | 3626 |
| 27820 | 7590 | 02/27/2006 | EXAMINER | |
| WITHROW & TERRANOVA, P.L.L.C. P.O. BOX 1287 CARY, NC 27512 | | | LE, UYEN CHAU N | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2876 | |

DATE MAILED: 02/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/756,893

Applicant(s)

DICKSON ET AL.

Examiner

Uyen-Chau N. Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>7/04</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Prelim. Amdt/Amendment

1. Receipt is acknowledged of the Amendment filed 05 December 2005.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-6 and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bohnert et al (US 5,797,470) in view of Anderson et al (US 4186871 A).

Re claims 1-6 and 9-10, Bohnert et al discloses a fuel dispensing system (fig. 1; col. 3, lines 62+) comprising a fuel dispenser [14a, 14b, 14c, 20a, 20b, 20c]; a control system 24 which is a site controller operatively associated with a plurality of fuel dispensers (fig. 2; col. 5, lines 38+); an indicia entry device 51 allowing a customer to input a

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verification indicia; and an encrypting module 59 enabling a card reader 53 which is a smart card reader or a magnetic card reader to receive and decrypt the encrypted verification indicia (figs. 4&7; col. 6, lines 15-25 and lines 53-63).

Bohnert et al is silent with respect to the card reader encrypt account information received from a customer's card.

Anderson et al teaches a customer inserts a magnetic encoded card into card reader 2 and enters his personal identification number (PIN) at keyboard 3. Account number 4, or other specified validation data, read from the card is converted by encryption logic 5 into a number, which is checked at comparator 6 for correspondence with PIN 7. An authorization signal is generated in response to verification of the verification indicia/PIN and the customer is permitted to proceed with the desired transaction (fig. 1; col. 4, lines 42-50).

It would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to incorporate the encryption logic of Anderson et al into the system as taught by Bohnert et al in order to provide with a more secure system wherein both the account information and the PIN are encrypted preventing the information from being manipulated during processing, thus preventing fraudulent use.

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4. Claims 11, 12, 14-17 and 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bohnert et al as modified by Anderson et al as applied to claim 1 above, and further in view of Johnson et al (US 5,384,850 - cited by the applicant). The teachings of Bohnert et al as modified by Anderson et al have been discussed above.

Re claims 11, 12, 14-17 and 19-22: Bohnert et al as modified by Anderson et al have been discussed above and a payment card interface separate from the communications interface for receiving encrypted customer verification information and providing a transaction authorization signal (fig. 2; col. 2, line 62 through col. 3, line 34), but fails to expressly disclose or fairly suggest that a security module associated with the control system providing encryption key information to the indicia entry device and the card reader, wherein the encryption key information is used by the indicia entry device to encrypt the input verification indicia and by the card reader to decrypt the encrypted verification indicia.

Johnson et al teaches the above limitation with a security module 2 providing encrypted information to decrypt the encrypted verification indicia (col. 8, line 5 through col. 13, line 30).

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It would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to incorporate the teachings of Johnson et al into the teachings of Bohnert et al/Anderson et al in order to provide Bohnert et al/Anderson et al with a more secure and accurate system via a security module, which can provide encrypted information to decrypt the encrypted verification. Furthermore, such modification would have provided Bohnert et al/Anderson et al with a more user-friendly system wherein the user does not have to be concerned with fraudulent use of the card event. Accordingly, such modification would have been an obvious extension as taught by Bohnert et al/Anderson et al, well within ordinary skill in the art, and therefore an obvious expedient.

5. Claims 8, 18, 25-26 and 28-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bohnert et al as modified by Anderson et al and Johnson et al as applied to claims 1, 14 and 26 above, and further in view of Coppola et al (US 6360138 B1). The teachings of Bohnert et al as modified by Johnson et al have been discussed above.

Re claims 8, 18, 25-26 and 28-29: Anderson et al further discloses the indicia entry device 25 and the card reader are each housed with a separate enclosure (fig. 2). However, Bohnert et al as modified by Anderson et al and Johnson et al

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have been discussed above, but fails to teach or fairly suggest that each is enclosed within a tamper-resistant housing.

Coppola et al teaches a fuel dispensing terminal comprising a card reader 96, a display 90 and a keypad 94 preferably includes a tamper resistant security module (TRSM), such as security module 34, which provides for encryption of PINs prior to delivery to the DM 70 (col. 7, lines 48-58).

It would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to incorporate the teachings of Coppola et al into the teachings of Bohnert et al/Anderson et al/Johnson et al in order to provide Bohnert et al/Anderson et al/Johnson et al with a more secure system, wherein the system will not operate its functions if the card reader module being harmed. Furthermore, such modification would have been an obvious extension as taught by Bohnert et al/Anderson et al/Johnson et al, well within ordinary skill in the art, and therefore an obvious expedient.

6. Claims 13 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bohnert et al as modified by Anderson et al and Johnson et al as applied to claim 1 above, and further in view of Schneier (Applied Cryptography, pp. 518-522 - cited by the applicant). The teachings of Bohnert et al as modified by Anderson et al/Johnson et al have been discussed above.

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Re claims 13 and 27: Bohnert et al/Anderson et al/Johnson et al have been discussed above but fails to expressly disclose or fairly suggest that the security module provides the encryption key information to the indicia entry device and the card reader using an encryption key exchange (herein after EKE).

Schneier teaches the above limitation with the uses and benefits of using an encryption key exchange (p. 518, line 5 through p. 522, line 11).

It would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to incorporate the teachings of Schneier into the teachings of Bohnert et al/Anderson et al/Johnson et al due to EKE's high secure (i.e., using both symmetric and public-key cryptography) in networking communication. Furthermore, such modification would have provided Bohnert et al/Anderson et al/Johnson et al with a more secure system, and thus a more user-friendly system via its privacy protection. Accordingly, such modification would have been an obvious extension as taught by Bohnert et al/Anderson et al/Johnson et al with a diverse system wherein EKE can be implemented with a variety of public-key algorithms, well within ordinary skill in the art, and therefore an obvious expedient.

7. Claims 7 and 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bohnert et al as modified by Anderson et

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al and Johnson et al as applied to claims 1 and 19 above, and further in view of Campbell (US 4259720 A). The teachings of Bohnert et al as modified by Anderson et al and Johnson et al have been discussed above.

Re claims 7 and 23-24: Bohnert et al as modified by Anderson et al and Johnson et al has been discussed above but is silent with respect to re-encrypting step prior to sending the account information to an authorization network.

Campbell teaches a secure transaction system comprising when a transaction request originated at a terminal 10, 12, or 14 associated with data processing unit 16 is determined to correspond to an account which is maintained by an institution associated with data processing unit 24, the secret code number entered by the customer at the terminal is re-encrypted by security module 20' and transmitted by communication line 23 along with other transaction message portions, which are unencrypted, to data processing unit 24, which is associated with the bank with which the customer maintains an account (fig. 3; col. 7, line 24-59).

It would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to incorporate the re-encrypting step of Campbell into the system as taught by Bohnert et al/Anderson et al/Johnson et al in order to provide

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Bohnert et al/Anderson et al/Johnson et al with a more secure and more universal system which can be utilized with accounts from different banks, and each individual bank have a unique encrypting technique/method, thus preventing information from being stolen during transmitting through the network.

Response to Arguments

8. Applicant's arguments with respect to claims 1-35 have been considered but are moot in view of the new ground(s) of rejection.

Newly cited reference to Anderson et al has been used in the new ground of rejection to further meet the limitation of the claimed invention.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS

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of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Uyen-Chau N. Le whose telephone number is 571-272-2397. The examiner can normally be reached on First Monday 5:30AM-1:30PM and Tues-Fri 5:30AM-3PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on 571-272-2398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Uyen-Chau N. Le
Primary Examiner
Art Unit 2876

February 21, 2006